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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,328	06/22/2001	Timothy P. Beaton	05516.079002	7221

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EXAMINER

TSAY, FRANK

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/888,328

Applicant(s)

BEATON ET AL.

Examiner

Frank S Tsay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/15/03 has been entered.

***Response to Arguments***

Applicant's arguments filed December 15, 2003 have been fully considered but they are not persuasive. As noted in the response beginning from page 5 through The examiner fails to see from the limitations set forth in the respective claims address the issues of drilling stability through balancing axial force applied on the bit, with the rotary speed, since nowhere in the claims address the relationship between the axial force and the rotary speed. Instead, claim 1 calls for a method of "applying an axial force to the bit so that the bit drills in a directionally stable manner". In this regard, Doster et al. provides a bi-center bit having stability enhancing features through proper manipulation of the lateral forces vector  $F_1$  and  $F_2$ , generated by the reamer bit and the pilot bit so that the resultant force bit force vector lying closer to  $F_2$  due to its dominance. The lateral forces  $F_1$  and  $F_2$ , in fact must have been generated from an axial force or weight on bit (WOB), as such physical phenomena is well known in the drilling art, be it a conventional drill bit or a bi-center bit (See Gatlin, pages 143-144, Fundamental

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Principles), and it is also clearly suggested by the abstract where the lateral force is being described as "longitudinally offset", as well as Col. 4, lines 36-60, where F1 and F2 are described as resultant lateral forces. The recitations "the bit drills in a directionally stable manner" and "the wellbore is drilled along a selected trajectory" are clearly anticipated by col. 2, lines 29+, as Doster et al drill bit intends to create drilling stability so that "dogleg" borehole can be prevented and therefore, "directional stability" or "stable trajectory" of the intended borehole is maintained. Finally, examiner disagrees with the applicant's assertion that Doster et al suggests the PDM motor, since nowhere in Doster et al teaches or suggests such teaching. For the above reasons, rejection of claims is repeated as follows:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-8 are rejected under 35 U.S.C. 102(a) as being anticipated by Doster et al '223.

Doster et al discloses a bi-center bits having stability features, with such features, directional stability can be anticipated when axial force is applied to the bit. Doster et al further suggests that the bi-center bit can be connected to an output shaft of a downhole motor (col. 5, lines 26+), the turbine-type mud motor in the claim is therefore anticipated, as it is known in the art that a downhole motor can be either a turbine or a

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positive displacement motor. The use of a bent housing motor or steerable motor is a well known art in directional drilling hence constitute little patentable distinction. The step of rotating the bi-center bit at high rate of revolution fails to constitute a patentable distinction since it is unclear what defines the term "high rate of revolution", and in fact the use of "turbine type mud motor" by nature should generate high rate of revolution on the drill bit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank S Tsay whose telephone number is (703) 308-2170. The examiner can normally be reached on Monday thru Friday, 7:30am-5:00 pm, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on (703)308-2151. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-2168.

Frank S Tsay  
Primary Examiner  
Art Unit 3672

1/8/04